

## WOULD DO WITHOUT PAY IF HIS ROAD SPOILED IN THREE YEARS

R. E. Bristol, Ogden Man, Tells of Merits of Concrete as Paving Material

"In order to introduce concrete pavement in Honolulu, if it were possible for the cement of our company to reach this market, I would be pleased to construct a mile of pavement here as a demonstration, to be paid for by the city at the end of two or three years if entirely satisfactory, and to be paid for by the cement company if not. I would be perfectly willing to put up a bond covering such a project and immediately go ahead with the construction."

That concrete undoubtedly would prove far better material for the construction of roads and sidewalks in Honolulu than the types of material now in use is the belief of Ralph E. Bristol, secretary and treasurer of the Ogden Portland Cement Company of Ogden, Utah, and the foregoing statement, made by him today, demonstrates his willingness to substantiate his claims.

Mr. Bristol is a son-in-law of Chapin A. Day, former treasurer of Marshall Field & Company of Chicago. Both Mr. Day and Mr. Bristol are visiting in Honolulu with their families, and intend to remain until the middle of March. Mr. Day has visited here four times. This is Mr. Bristol's second trip.

"The cement manufacturers' association of the United States, called the Portland Cement Association," says Mr. Bristol, "has been putting down concrete roads for the last 10 years, and every road laid down under its auspices has been carefully checked by an engineering association representing 95 per cent of all the cement manufacturers in the United States. Real concrete roads and pavements have proved to be the best in the market. The association referred to works in harmony with the bureau of standards of the United States in order to get specifications worked out. Concrete street paving and road building is in its infancy, and where construction work, including proper specifications, has been carried out faithfully roads and pavements have proved so satisfactory and so permanent that there is practically no upkeep expense for the first five years, and we haven't any idea of the length of life of a concrete road as yet."

Regarding road and street conditions in Honolulu Mr. Bristol is of the opinion that there is a constant effort here to build roads without any permanent results. Politics, he declares, certainly must be back of such conditions.

**Satisfactory As Others.**  
"From the standpoint of the cement manufacturer," he goes on, "we are naturally competing with all other types of roads and pavements that do not use concrete as a base. But practical concrete, such as is well known to the engineering fraternity and to the public generally, for foundation work, big dams and reservoirs and sidewalks should make it apparent to the property owner or to any city administration that a concrete street, faithfully constructed in accordance with the proper specifications, will be fully as satisfactory as any other type of material."

"As far as I am concerned, our cement cannot possibly reach Honolulu on account of the competitive conditions on the coast. So I have no personal interest in the local situation, except that I know that concrete pavement, where properly constructed, brings permanent success, and has brought it all over the United States. Six years ago there were 500,000 barrels of cement used in the United States in the construction of roads and pavement, while in 1915 nearly 9,000,000 barrels were used for the same purpose."

Mr. Bristol calls attention to the magnificence and beauty in construction of the Kaula building, occupied by the Hawaiian Trust Company, which is built of concrete. He continues:

**No Objection to "Tapping."**  
"While as cement manufacturers we favor plain concrete pavement, we specify simple material for all ordinary roads and for highways accustomed to only light traffic. There is no reason why, if property owners desire it or if the traffic is extremely heavy, a six-inch concrete base should not be used with an asphalt top, or with an asphalt, bitulithic, wood block, or brick surface. Any one of these two-course pavements on a proper concrete base is thoroughly satisfactory, but much more expensive than a six-inch, one-course plain concrete pavement, which I consider is amply sufficient for ordinary street paving in Honolulu, except in the extremely heavy traffic districts of the business sections, where I would favor a six-inch concrete base, with a two-inch asphalt or some other satisfactory top surface."

Mr. Bristol believes that if Kalakaua avenue was paved with concrete from King street to the park, it would require absolutely no attention for a period of at least three years, and the upkeep for a period of from 10 to 15 years would be apparently small. The cost for a square yard for a six-inch one-course pavement would not exceed \$1.60.

**Effort to Maintain Streets.**  
"This being my second trip to Honolulu," says Mr. Bristol, "I have noticed an apparent continued effort on the part of the city administration to maintain their streets, and I am sure

that if concrete were used in paving as consistently as they are now working with the present types, the city would be gradually covered with a satisfactory and permanent type of street pavement, and because of the fact that they would not have to go over the same street constantly year after year, the paved area of Honolulu would, at the end of five years, be a surprise to the citizens."

Concrete pavement is not slippery, Mr. Bristol explains. It absorbs all moisture and has other qualities which will not be found in other types of pavement. It does not require sprinkling and there is no dust.

Utah is one of the several states which have experimented with concrete roads with a marked degree of success. That state started out with a trial half-mile of pavement, and now is laying it as fast as it can afford it.

## 'WARRENITE OR CONCRETE WITH PROPER SURFACE'

(Continued from page one)

sible to give one's opinion in the matter, and as I take it from your letter you simply wish a short statement, I will try to render it.

"You first state that your work is of necessity all done under the assessment basis, and that ten-year bonds are issued in payment for your street work. Under these conditions I do not think you would be justified in laying any pavement that would not last longer than the life of your bonds. You state first that Kalakaua avenue is to be paved to the extent of 35,000 square yards, and that the original proposition was to pave this with warrenite, but at the last meeting of the Board of Supervisors it was changed to a 6-in. concrete road. I believe this is a mistake on the part of the supervisors. We in California have built several hundred miles of concrete roads, and to say the least, they are far from satisfactory. The initial experiments in this line were made by the United States government in the Presidio in San Francisco. This is a concrete road laid in slabs of about 25 feet in length for the full width of the road, which, I think is 16 feet. On a recent trip over this road in an automobile I noticed at every expansion joint at each side of the road the concrete is badly cracked and deteriorating to a marked extent. This road was built under strict inspection, and according to the specifications of the United States government, and should have been a shining example of concrete road, if such a thing is possible."

"Do not misunderstand me as being opposed to concrete roads—I am not. I think that a concrete base under some conditions is the ideal road, although no concrete road in California that I am aware of has been constructed and it is giving complete satisfaction unless it has been covered with a wearing surface of some kind. The thicker the wearing surface, the more satisfactory the road. On the other hand, we personally have built several thousand yards of roads in this state of asphalt concrete or warrenite, which have been giving entire satisfaction. I visited yesterday some 40,000 yards of Warrenite pavement that was laid under our supervision some six years ago. This pavement has never had five cents spent on it to date and looks exactly the same as when it was laid."

"The state highway in California is almost entirely constructed of a concrete base, and in some places is a straight concrete road with no wearing surface. Every one here believes that within the next four or five years it will be necessary for the highway commission to cover all of the so-called concrete roads with some type of wearing surface, preferably bitulithic or warrenite. While either of the latter two types are a little more expensive than the so-called Topeka and other types of wearing surface, I personally believe they are well worth the additional investment."

"We have just recently finished 60,000 yards of this type of pavement for the City of Livermore. This is a 2-inch bitulithic surface on a 5-inch concrete base, and I venture to say this pavement will be in excellent condition 20 years from now, and with proper care will last indefinitely. I also believe that the state highway commission has made a serious mistake in building the roads of concrete here only 4 inches thick."

"I also note your supervisors contemplating building a concrete road 6 inches thick. This, to my mind, is a great deal wiser investment than a 4-inch base. I would, however, cover the concrete with 2 inches of bitulithic or warrenite top."

"So far as I know there has been no complaint to be found with either of these types of pavement laid on the coast, particularly California, the last few years. There were one or two faults found with some of this class of pavement laid around Portland, but in almost every instance it was due to improper inspection and not to the type of pavement. As you probably know, the county commissioners of Multnomah let a contract (the largest single contract ever let in the United States west of the Mississippi river) for 70 miles of county highway at a cost of approximately \$350,000. This highway is to be constructed of bitulithic pavement throughout, and was decided upon after the most rigid investigation by the Chamber of Commerce of Portland

and various other civic bodies. "I might add to the above by saying that I am an ardent believer in a concrete base with not less than a two-inch asphaltic wearing surface; the wearing surface to be composed of either warrenite, bitulithic or some other well-known type of construction."

"Number two, Beretania street, I note, is to be paved with asphalt macadam, penetration method. To my mind it is absolutely impossible to build a road by this method, which will last during the life of your ten-year bond. Oil macadam or asphaltic macadam has been used quite extensively in the southern part of the state of California, and also to a very large extent in the City of Oakland. While this makes a good, cheap road for light traffic, its life is very limited, and the city of Oakland will be compelled within the next three years to repave a great many miles of streets of this type of construction. The county of Los Angeles was one of the first counties in California to bond itself for good roads, and expended the sum of \$3,000,000 in county highways several years ago. Most of the highways constructed by them were an oil or asphaltic macadam of either the penetration or other methods, they being the pioneers in the county highway construction in California. They naturally endeavored to build the greatest number of miles of road with their money, rather than the best roads possible, and I understand that the maintenance charge on some of these roads is now exceeding 5 per cent per annum. It is needless to say that they will not construct any more of this particular type."

"I am opposed to the construction of either asphalt or oil macadam roads unless the same are to be paid for in cash, and the construction is to be upon residence streets where the traffic is very limited, and abutting property is of a value which will not permit of the construction of a higher type of pavement. I would be of the opinion that with your moist climate and extremely heavy rains, that an asphalt macadam would not give you a great deal of satisfaction. You also state that the above streets are subject to heavy automobile traffic and more or less truck hauling. This, in my opinion, should be reason to condemn the construction of a macadam road thereon. While a concrete base with a two-inch top may represent a little greater outlay than you had anticipated for the initial cost, it will more than reimburse you in the long run, for I have no hesitancy in stating that if this type is made of warrenite or bitulithic pavement, it will last more than twice the length of your bonds."

In a supplementary letter Sloan says: "I might state that we have built a great many thousand yards of pavement in this state without any concrete whatever, merely four or five-inch asphalt concrete, so-called, or warrenite pavement; and it has given complete satisfaction. I think the question of concrete is largely one of sub-grade. In some localities it is essential that a wearing surface be placed upon a concrete base; in other places, where sub-grade is good, a concrete base is not necessary, but my idea of a concrete road is that it must be covered with some surface which has more or less 'give' to it—in other words, it must have a cushion on it, particularly if it is to be used for extensive automobile traffic or truck hauling. A rigid pavement will not stand up under this type of usage without a cushion top."

Two more negroes were killed and four negro lodge buildings burned in the western section of Early county, Ga., in clashes between whites and negroes.

### NOTICE

From and after date, the Horseshoe Bend road bridge, connecting Kaneohe and IV road and Kalihi street, will be closed to traffic pending repairs.

By order of the  
CITY AND COUNTY ENGINEER.  
6374-31



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## WETTEST MONTH

(Continued from page one)

It has held for the past several days, only a very slight change being noted. **Cold Winds—More Rain.** Between 11 o'clock and 12 o'clock today the wind swung to the west and the thermometer dropped slightly. Cold winds will probably bring on still more rain. This morning at 6 o'clock the wind reached a velocity of 48 miles an hour.

That the present storm is excessive is shown by figures computed by the weather bureau, showing the mean rainfall by months in the last 11 years. The means are as follows:  
January, 3.81; February, 2.62; March, 2.49; April, 1.33; May, 1.05; June, .89; July, .86; August, .97; September, 2.66; October, 1.00; November, 2.96; December, 4.15. Total, 23.80. Up to noon today no large damage had been reported at the city engineer's office.

Nuuanu street which was ripped out by the November storm, the asphalt being torn off by the water, is again washed out. All of the former holes which were merely filled in with rock until a more permanent job could be done upon them, have washed out, the rocks being deposited in the ditches alongside.

**Waialae Ranch Flooded.** Waialae road is a running stream two and one-half feet deep and a mile long, according to word telephoned in to the Star-Bulletin office shortly after noon today, by Paul R. Isenberg. Mr. Isenberg declared it is the worst downpour that he has ever seen in that section. A large portion of Waialae ranch, his property, is under four feet of water.

Much damage was done yesterday on the other side of the island in the Heela district, according to R. S. Chase, road engineer at Hakuipu, who arrived in the city this morning by automobile.

"You see the road is still passable," laughed Chase as he climbed from his car, "but it is practically all under water."

Wind recorded here about 10 o'clock yesterday morning at 49 miles an hour evidently gathered force as it swept over the mountains, dropping to the Heela section and hitting buildings with an upward and lifting force.

**Cannery Roof Damaged.** Roofs were torn from many houses, the Japanese groceries and small stores suffering heavily. A portion of the corrugated iron cupola on the roof of the Libby, McNeil & Libby cannery on the other side of the island was torn off and sent flying helter-skelter by the wind.

Luckily no damage to the stored fruit inside was done, according to F. W. MacFarlane, president, today. Laborers' camps at the cannery suffered heavily, the structures of wood and iron being at the mercy of the terrific wind.

**AD WETTEST**  
Mr. MacFarlane said today that it will be difficult to estimate the damage until the buildings have been reconstructed. Describing the scene at the Libby cannery today Engineer Chase says that the main bunkhouse, a long building, has been veritably twisted around by the force of the wind, at an angle of at least 45 degrees. The main bunkhouse has also suffered.

Small boats are tied up at the available landings and are waiting until calmer weather before venturing outside. When the hard wind struck the high waves yesterday offshore in the neighborhood the sight is said to have been wonderful.

**Turned Over Three Times.** Houses here and there were toppled over. One cottage belonging to a laborer on the Hakuipu section was overturned three times by the storm, the laborer, his wife and three children being in it at the time. They suffered only from slight damages.

No great damage had been done to the pineapple fields this morning, though much more rain threatens to wash them badly. High winds were noted last night on the peninsula at Pearl Harbor, and algaroba trees, which grow so thickly in the neighborhood, were down in large numbers this morning. The morning train from Pearl City was delayed for nearly an hour today owing to trees and branches having blown near or across the track.

**Engine Off Track.** Several trees have been blown across the track and telephone lines are down. All trains are behind time. Relay messages today brought in word of a freight engine being off the track in the Waialae district. Several landslides have interrupted traffic, though up to late this afternoon these had been minor and were easily cleared away. It is supposed that the engine is off the track owing to a washout, though only meager reports had reached the railway office today. Night trains will not be run, for tonight at least.

Sam Keilinoi, acting road overseer, despatched two men up to Tantalus yesterday to drain the road there, which is already in an impassable condition, and protect it as much as possible from the further onslaught of the storm.

Keilinoi says his forces are well organized, and that with the storm drains well cleared, it will take almost a cloudburst to do the city streets much damage.

It was found necessary yesterday to withdraw the road gang that had been placed at work to repair Koko Head road in Waialae. The Rapid Transit bus is laid off until such time as the road is in a better condition.

Adolph street, in Manoa valley, is said to have suffered from the heavy drenching of the last few days, and to be washed out badly. Kalihi residents say that the Kalihi stream is again a roaring torrent, due to heavy rains in the headwater district. Taro in large quantities is floating down the stream. Puunui section is flooded as usual, water coming down Schoof and Liliha streets in a stream.

## Schofield Notes

(Special Star-Bulletin Correspondence)

SCHOFIELD BARRACKS, Jan. 17.—Maj. Francis E. Lacey, 1st Infantry, having reported for duty this date is assigned to command of the 2nd Battalion.

First Lieut. Fred W. Pitts, 1st Infantry, is transferred from Company B to Company F.

First Lieut. E. F. Rice, 1st Infantry, is transferred from Company F to Company B.

Second Lieut. Roy M. Jones, 1st Infantry, having reported for duty this date is assigned to Company B.

First Lieut. Walter E. Pridgen, 1st Infantry, is transferred from Company E to Company A.

First Lieut. John D. Burnett, 1st Infantry, having reported for duty this date is assigned to Company E.

Upon the recommendation of the company commander, the following promotions and appointments are made in Company L:

Corpl. John E. Teale, to be sergeant; vice Thoesen, transferred to Army Reserve.

Corpl. John W. Smith, to be sergeant, vice Schonder, transferred to the Army Reserve.

Corpl. William O'Brien, to be sergeant, vice Stovall, transferred to the Army Reserve.

Pvt. Jesse W. Suttan, to be corporal, vice Teale, promoted.

Pvt. William J. Wallace, to be corporal, vice Smith, promoted.

Pvt. Frederick A. Peters, to be corporal, vice O'Brien, promoted.

Second Lieut. Robert T. Snow is detailed as battalion signal officer, 3rd Battalion.

Pvt. William S. Meyer, Company M, is relieved from special duty on the golf course.

Pvt. Asa W. Ziekafosse, Company L, is relieved from special duty driving lawn mower, and is detailed on special duty on the golf course.

Pvt. Patrick McDonald, Machine Gun Company, is transferred from Company L to Company H, and, upon the recommendation of his provisional company commander, is appointed corporal, vice Mitchell, transferred.

Pvt. Ernest W. Rodgers, Company G, and Alexander Vershehora, Company L, are relieved from special duty as clerks in the 1st Infantry Post Exchange, and Pts. Edward Kenny, Company L, and E. Rose, Company M, are detailed in their stead.

Upon the recommendation of the company commander, the following appointment is made in Company M: Pvt. John P. Mundt, to be corporal, vice Warren, furloughed to the Army Reserve.

Pvt. Charles E. Boughan, Company K, and Oscar M. Phillips, Company L, are detailed as members of the Provisional Machine Gun Company, and will report to the commanding officer of that organization for duty.

Upon the recommendation of the company commander, the following promotion is made in Company E: Corpl. Cyrus M. Flick, to be sergeant, vice Wallace discharged.

**SCHOFIELD BARRACKS, Jan. 18.**—Considerable damage was done by the high winds at Schofield yesterday morning. The barracks of the headquarters detachments, 1st Field Artillery, lost its roof, part of it falling into the building and part being carried several hundred feet away. Only three men were in the building at the time, the remainder fortunately being at breakfast in another building. None of these three men was injured. The building is of the very light box-car type, with rounded roof, similar to the barracks of the 1st Infantry that were demolished by the kona on Christmas night.

The quarters occupied by Chaplain Michael Lenehan and Lieut. A. L. P. Johnson, 4th Cavalry, had its roof lifted off yesterday morning. At Castner two 50-foot construction towers and considerable scaffolding at the

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CITY TRANSFER COMPANY  
PHONE 1281

new 1st Infantry barracks were torn down by the wind. The damage to canvas was considerable all over the post.

Pvt. Curtis Beckner, Company B, 1st Infantry, who was tried and convicted by special court martial on charge of "assault with a deadly weapon with intent to do great bodily harm, to the prejudice of good order and military discipline," has had, his sentence remitted and been re-assigned to duty. Additional evidence obtained subsequent

## Love's Bakery

to the publication of his sentence on January 12th, established his innocence.

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Good auto road  
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If you want to know what really good light is, take home some Westinghouse MAZDA LAMPS—

Put them in the living room chandelier and watch the effect.

Note how well the delicate colors in draperies and rugs show up at their true values. Note the soft, agreeable effect on your eyes. More light, too—2½ times as much, to be exact—but the cost is the same as for the poorer old style light. Worth considering, isn't it? Get a few today.

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## Time now for new "Sunfasts" and Tapestries

There are fashions in what to put on the walls and over the windows of the home just as there are in dress fabrics, and when you see these fetching new patterns in the Sunfasts and tapestries you will surely be delighted.

Soft blues, greens, grays and old rose that blend beautifully with one another and with furniture of any finish. The "Sunfasts" are 50 inches wide, and owing to the scarcity of fast-dye stuffs, future shipments will undoubtedly show an advance in cost, but these, having been bought before the rise in cost of raw materials, are sold at moderate prices. \$1.25 and \$1.50 a yard.

The Tapestries are 48 inches wide and are priced at \$1.50, \$1.75 and \$2.25 a yard.

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